

IN THE CLAIMS

Substitute the following amended Claims 1, 2, 7, 10 and 13 for the pending claims of the same number:

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13) 1. (Twice Amended) An apparatus for casting a vehicle wheel component comprising:

a mold base segment;

a plurality of movable mold side segments;

a movable top core segment, said top core segment co-operating with said base and side segments to define a gravity fed mold for gravity casting a vehicle wheel component; and

a vibration device mounted adjacent to said top core segment, said vibration device being operative to selectively vibrate said top core segment.

2. (Amended) The apparatus according to claim 19 wherein said vibration device is a ball vibrator.

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10~ 7. (Twice Amended) The apparatus according to claim 19 wherein said vibration device is a reciprocating hammer.

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15) 10. (Amended) A method for forming a vehicle wheel component casting comprising the steps of:

(a) providing a multi-segment gravity fed mold having a top core for gravity casting the wheel component, the top core having a vibration device mounted adjacent thereto, the vibration device being selectively operable to vibrate the mold top core;

(b) filling the cavity of the wheel component mold by gravity with a charge of molten metal;

(c) activating the vibration device to vibrate the top core upon completion of the filling of the mold cavity with molten metal;

(d) deactivating the vibration device;

(e) opening the mold; and

(f) removing the wheel component casting from the mold.

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13. (amended) The method according to claim 10 wherein the top core is vibrated in step (c) after a predetermined time period has elapsed following the filling of the mold cavity.

Cancel claims 14 and 15.

Substitute the following amended Claims 16 and 17 for the pending claims of the same number:

16. (Amended) The method according to claim 12 wherein the multi-segment mold provided in step (a) forms a one piece vehicle wheel.

17. (Amended) The method according to claim 12 wherein the multi-segment mold provided in step (a) forms a full face wheel disc.

Add new claims 18 through 27 as follows:

18. (New) The apparatus according to claim 2 wherein said ball vibrator device is pneumatically powered and further wherein said ball vibrator includes an inlet port for receiving compressed air.

19. (New) The apparatus according to claim 18 further including a supply of compressed air connected to said inlet port of said ball vibrator, a solenoid valve included in said compressed air supply for controlling the flow of compressed air into said inlet port of said ball vibrator, and an adjustable pressure regulator included in said compressed air supply, said pressure regulator controlling the speed and force of said ball vibrator.

20. (New) The apparatus according to claim 7 wherein said reciprocating hammer is pneumatically powered and further wherein said vibration device includes an inlet port for receiving compressed air.

21. (New) The method according to claim 10 further including, subsequent

to step (d), allowing the metal in the mold cavity to continue to cool before the mold is opened.

22. (New) The method according to claim 10 wherein the vibration device provided in step (a) is pneumatically powered.

23. (New) A method for forming a vehicle wheel component casting comprising the steps of:

23. (New) A method for forming a vehicle wheel component casting comprising the steps of:
- (a) providing a multi-segment gravity fed mold having a top core for gravity casting the wheel component, the top core having a vibration device mounted adjacent thereto, the vibration device being selectively operable to vibrate the mold top core;
  - (b) activating the vibration device to vibrate the top core;
  - (c) filling the cavity of the wheel component mold by gravity with a charge of molten metal;
  - (d) continuing to vibrate the top core while the molten metal cools;
  - (d) deactivating the vibration device;
  - (e) opening the mold; and
  - (f) removing the wheel component casting from the mold.

24. (New) The method according to claim 23 wherein the multi-segment mold provided in step (a) forms a one piece vehicle wheel.

25. (New) The method according to claim 23 wherein the multi-segment mold provided in step (a) forms a full face wheel disc.

26. (New) The method according to claim 23 further including, subsequent to step (d), allowing the metal in the mold cavity to continue to cool before the mold is opened.

27. (New) The method according to claim 23 wherein the vibration device provided in step (a) is pneumatically powered.